

WHAT IS CLAIMED IS:

1. A method of performing an address look-up, the method comprising:  
receiving a query from a local host requesting address information;  
determining whether the address information is stored in memory;  
selectively transmitting the address information to the local host based upon the determining step; and  
selectively forwarding the query over a communications network to a server to retrieve the address information.
2. The method according to Claim 1, further comprising:  
updating the address information in memory with the retrieved address information from the server.
3. The method according to Claim 1, wherein the query in the receiving step specifies a domain name, and the address information corresponding to the domain name is an Internet Protocol (IP) address.
4. The method according to Claim 1, wherein the communications network includes a satellite that is configured to forward the query to the server.
5. The method according to Claim 1, further comprising:  
receiving a multicast message to pre-load the memory with the address information.
6. A terminal apparatus for transmitting packets over a communications network, comprising:  
a communication interface configured to receive a query from a local host requesting address information;  
a memory configured to store address information; and  
a processor coupled to the memory and the communication interface, the processor being configured to determine whether the address information associated with the query is stored in the memory, and to selectively transmit the address information to the local host in response to the determination, the processor being configured to forward the query over the communications network to a server to retrieve the address information.

7. The terminal apparatus according to Claim 6, wherein the processor is further configured to update the address information in the memory with the retrieved address information from the server.

8. The terminal apparatus according to Claim 6, wherein the query specifies a domain name, and the address information corresponding to the domain name is an Internet Protocol (IP) address.

9. The terminal apparatus according to Claim 6, wherein the communications network includes a satellite that is configured to forward the query to the server.

10. The terminal apparatus according to Claim 6, wherein the communication interface is configured to receive a multicast message to pre-load the memory with the address information.

11. A system for performing an address look-up, comprising:  
a terminal configured to receive a query from a local host requesting address information, the terminal comprising,  
a memory configured to store address information, and  
a processor coupled to the memory and configured to determine whether the address information associated with the query is stored in the memory, and to selectively transmit the address information to the local host in response to the determination; and  
a server communicating with the terminal over a communications network, the server being configured to receive the query from the terminal and to transmit the address information corresponding to the query to the terminal.

12. The system according to Claim 11, wherein the processor is further configured to update the address information in the memory with the address information from the server.

13. The system according to Claim 11, wherein the query specifies a domain name, and the address information corresponding to the domain name is an Internet Protocol (IP) address.

14. The system according to Claim 11, wherein the communications network includes a satellite that is configured to forward the query from the terminal to the server.

15. The system according to Claim 11, wherein the terminal is configured to receive a multicast message to pre-load the memory with the address information.

16. A terminal apparatus capable of performing an address look-up, the terminal apparatus comprising:

means for receiving a query from a local host requesting address information;

means for determining whether the address information is stored in memory;

means for selectively transmitting the address information to the local host based upon the determination; and

means for selectively forwarding the query over a communications network to a server to retrieve the address information.

17. The terminal apparatus according to Claim 16, further comprising:

means for updating the address information in memory with the retrieved address information from the server.

18. The terminal apparatus according to Claim 16, wherein the query specifies a domain name, and the address information corresponding to the domain name is an Internet Protocol (IP) address.

19. The terminal apparatus according to Claim 16, wherein the communications network includes a satellite that is configured to forward the query to the server.

20. The terminal apparatus according to Claim 16, further comprising:

means for receiving a multicast message to pre-load the memory with the address information.

21. A computer-readable medium carrying one or more sequences of one or more instructions for performing an address look-up, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

receiving a query from a local host requesting address information;

determining whether the address information is stored in memory;

selectively transmitting the address information to the local host based upon the determining step; and

selectively forwarding the query over a communications network to a server to retrieve the address information.

22. The computer-readable medium according to Claim 21, wherein the one or more processors further perform the step of:

updating the address information in memory with the retrieved address information from the server.

23. The computer-readable medium according to Claim 21, wherein the query in the receiving step specifies a domain name, and the address information corresponding to the domain name is an Internet Protocol (IP) address.

24. The computer-readable medium according to Claim 21, wherein the communications network includes a satellite that is configured to forward the query to the server.

25. The computer-readable medium according to Claim 21, wherein the one or more processors further perform the step of:

receiving a multicast message to pre-load the memory with the address information.

26. A method of performing an address look-up over a satellite network, the method comprising:

receiving a query from a local host requesting address information;  
determining whether the address information is stored in a cache;  
transmitting the address information to the local host in response to determining that the address information is stored in the cache; and  
selectively forwarding the query over the satellite network to a server to retrieve the address information.

27. The method according to Claim 26, further comprising:  
refreshing the address information in the cache with the retrieved address information from the server.

28. The method according to Claim 26, wherein the query in the receiving step specifies a domain name, and the address information corresponding to the domain name is an Internet Protocol (IP) address.

29. The method according to Claim 26, further comprising:  
receiving a multicast message containing a plurality of address information to pre-load the cache.

30. A satellite terminal for providing address information, comprising:

a cache configured to store address information; and  
a processor coupled to the memory and configured to determine whether a query from a host requesting a particular address information produces a hit in the cache, wherein a cache hit causes transmission of the address information to the host, the processor being configured to forward the query over a satellite network to a server to retrieve the particular address information, the cache being updated with the retrieved particular address information.

31. The terminal according to Claim 30, wherein the query specifies a domain name, and the address information corresponding to the domain name is an Internet Protocol (IP) address.

32. The terminal apparatus according to Claim 30, wherein the cache is pre-loaded with address information via a multicast message.